



Handwritten signature

Docket No.: 13111-00001-US
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Markus Matuschek et al.

Application No.: 10/521916

Confirmation No.: 6155

Filed: January 20, 2005

Art Unit: N/A

For: PROCESS FOR THE
BIOTRANSFORMATION OF
CAROTENOIDS

Examiner: Not Yet Assigned

INFORMATION DISCLOSURE STATEMENT (IDS)

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Pursuant to 37 CFR 1.56, 1.97 and 1.98, the attention of the Patent and Trademark Office is hereby directed to the references listed on the attached PTO/SB/08. It is respectfully requested that the information be expressly considered during the prosecution of this application, and that the references be made of record therein and appear among the "References Cited" on any patent to issue therefrom.

This Information Disclosure Statement is filed before the mailing date of a first Office Action on the merits as far as is known to the undersigned (37 CFR 1.97(b)(3)).

A full translation of the non-English language patent references is enclosed.

Applicant has not submitted copies of each cited U.S. patent and U.S. patent application as required by 37 CFR 1.98(a)(2)(i), amended October 2004, as the U.S. Patent and Trademark Office has waived this requirement for all U.S. patent applications. Applicant submits herewith copies of foreign and non-patents in accordance with 37 CFR 1.98(a)(2).

A concise explanation of relevance of DE 100 51 175-A1 in the German language listed on form PTO/SB/08 is in the form of an English language copy of a Search Report from a foreign patent office, issued in a counterpart application, which refers to the relevant portions of the references, and in copies of English language equivalents.

The relevance of Schlegel, H.G., "Allgemeine Mikrobiologie," pages 172-175, is apparent from the English translation of the present application at page 8, lines 24-27. The relevance of Kauffmann, I.M., "Erhöhung der Mikrobiellen und Molekularen Diversität von Carotinoiden" is apparent from the English translation of the present application at page 23, lines 12-14.

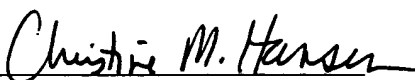
In accordance with 37 CFR 1.97(g), the filing of this Information Disclosure Statement shall not be construed to mean that a search has been made or that no other material information as defined in 37 CFR 1.56(a) exists. In accordance with 37 CFR 1.97(h), the filing of this Information Disclosure statement shall not be construed to be an admission that any patent, publication or other information referred to therein is "prior art" for this invention unless specifically designated as such.

It is submitted that the Information Disclosure Statement is in compliance with 37 CFR 1.98 and the Examiner is respectfully requested to consider the listed references.

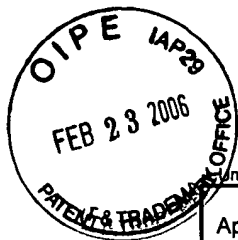
The Director is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Deposit Account No. 03-2775, under Order No. 13111-00001-US.

Dated: February 21, 2006

Respectfully submitted,

By 
Christine M. Hansen

Registration No.: 40,634
CONNOLLY BOVE LODGE & HUTZ LLP
Correspondence Customer Number: 23416
Attorney for Applicant



PTO/SB/92 (09-04)

Approved for use through 07/31/2006. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Application No. (if known): 10/521916


Attorney Docket No.: 13111-00001-US

Certificate of Mailing under 37 CFR 1.8

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to:

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

on February 21, 2006
Date


Signature

Jean M. Marshall

Typed or printed name of person signing Certificate

Registration Number, if applicable

Telephone Number

Note: Each paper must have its own certificate of mailing, or this certificate must identify each submitted paper.

IDS (Citation) by Applicant (39 References) (2 pages)
Information Disclosure Statement (2 pages)
37 References



PTO/SB/08a/b (07-05)

Approved for use through 07/31/2006. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/B/PTO			Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i>			Application Number	10/521916-Conf. #6155
			Filing Date	January 20, 2005
			First Named Inventor	Markus Matuschek
			Art Unit	N/A
			Examiner Name	Not Yet Assigned
			Attorney Docket Number	13111-00001-US
Sheet	1	of	2	

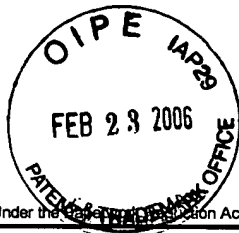
U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. ¹	Document Number Number-Kind Code ² (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	AA*	US-2002/0051998	05-02-2002	Schmidt-Dannert et al.	
	AB	US-2005/0048484-A1	03-03-2005	Hauer et al.	

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. ¹	Foreign Patent Document Country Code ³ -Number ⁴ -Kind Code ⁵ (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
	BA	CA-2 365 906-A1	10-19-2000	BASF Aktiengesellschaft		
	BB	CA-2 378 615-A1	02-01-2001	BASF Aktiengesellschaft		
	BC	CA-2 379 518-A1	02-01-2001	BASF Aktiengesellschaft		
	BD	CA-2 380 186-A1	02-01-2001	BASF Aktiengesellschaft		
	BE	DE-100 11 723-A1	09-13-2001	BASF AG	See BB, BC, BD	✓
	BF	DE-100 14 085-A1	09-27-2001	BASF AG	See BB, BC, BD	✓
	BG	DE-100 51 175-A1	05-02-2002	BASF AG	See abstract	✓
	BH	DE-199 16 140-A1	10-12-2000	BASF AG	See BA	✓
	BI	DE-199 35 115-A1	02-01-2001	BASF AG	See BB, BC, BD	✓
	BJ	DE-199 55 605-A1	05-23-2001	BASF AG	See BB, BC, BD	✓
	BK	WO-02/33057-A1	04-25-2002	BASF Aktiengesellschaft	See AB	✓

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. * CITE NO.: Those application(s) which are marked with an single asterisk (*) next to the Cite No. are not supplied (under 37 CFR 1.98(a)(2)(iii)) because that application was filed after June 30, 2003 or is available in the IFW. ¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
	CA	SCHMIDT-DANNERT, C. Engineering novel carotenoids in microorganisms. Current Opinion in Biotechnology 2000, 11:255-261.	
	CB	SCHOEFS, B. et al. Astaxanthin accumulation in <i>Haematococcus</i> requires a cytochrome P450 hydroxylase and an active synthesis of fatty acids. FEBS Letters 500 (2001): 125-128.	
	CC	SCHLEGEL, H.G. Allgemeine Mikrobiologie, Thieme Verlag Stuttgart, 5th Ed., 172-175.	
	CD	PEARSON, W.R. et al. Improved tools for biological sequence comparison. Proc. Natl. Acad. Sci. USA, April 1988, Vol. 85, 2444-2448.	
	CE	NARANG, S. DNA Synthesis. Tetrahedron 39(1), 1983, 3-22.	
	CF	ITAKURA, K. et al. Synthesis and use of synthetic oligonucleotides. Ann. Rev. Biochem 553, 1984, 323-356.	
	CG	ITAKURA, K. et al. Expression in <i>Escherichia coli</i> of a chemically synthesized gene for the hormone somatostatin. Science 198, 1977, 1056-1063.	
	CH	IKE, Y. et al. Solid phase synthesis of polynucleotides. VIII. Synthesis of mixed oligodeoxyribonucleotides by the phosphotriester solid phase method. Nucleic Acids Research 11(2), 1983, 477-488.	

Examiner Signature		Date Considered	
--------------------	--	-----------------	--



PTO/SB/08a/b (07-05)

Approved for use through 07/31/2006. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Patent and Trademark Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/B/PTO				Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use as many sheets as necessary)				Application Number	10/521916-Conf. #6155
				Filing Date	January 20, 2005
				First Named Inventor	Markus Matuschek
				Art Unit	N/A
				Examiner Name	Not Yet Assigned
Sheet	2	of	2	Attorney Docket Number	13111-00001-US

CI	VOET. Chemical synthesis of oligonucleotides. Biochemie, 2nd Ed. New York: Wiley Press, 896-897.
CJ	SMITH, D.B. et al. Single-step purification of polypeptides expressed in <i>Escherichia coli</i> as fusions with glutathione S-transferase. Gene 67 (1988), 31-40.
CK	AMANN, E. et al. Tightly regulated <i>tac</i> promoter vectors useful for the expression of unfused and fused proteins in <i>Escherichia coli</i> . Gene 69 (1988), 301-315.
CL	STUDIER, F.W. et al. Use of T7 RNA polymerase to direct expression of cloned genes. Methods in Enzymology 185 (1990), 60-89.
CM	BALDARI, C. et al. A novel leader peptide which allows efficient secretion of a fragment of human interleukin 1 β in <i>Saccharomyces cerevisiae</i> . EMBO J. 6(1), 1987, 229-234.
CN	KURJAN, J. et al. Structure of a yeast pheromone gene (<i>MF</i> α): a putative α -factor precursor contains four tandem copies of mature α -factor. Cell 30, 1982, 933-943.
CO	SCHULTZ, L. et al., Expression and secretion in yeast of a 400-kDa envelope glycoprotein derived from Epstein-Barr virus. Gene 54, 1997, 113-123.
CP	SMITH, G.E. et al. Production of human beta interferon in insect cells infected with a baculovirus expression vector. Mol. Cell Biol. 3(12), 1983, 2156-2165.
CQ	LUCKOW, V.A. et al. High level expression of nonfused foreign genes with <i>Autographa californica</i> nuclear polyhedrosis virus expression vectors. Virology 170, 1989, 31-39.
CR	BECKER, D. et al. New plant binary vectors with selectable markers located proximal to the left T-DNA border. Plant Molecular Biology 20, 1992, 1195-1197.
CS	BEVAN, M. Binary <i>Agrobacterium</i> vectors for plant transformation. Nucleic Acids Research 12(22), 1984, 8711-8721.
CT	SEED, B. An LFA-3 cDNA encloses a phospholipid-linked membrane protein homologous to its receptor CD2. Nature 329, 1987, 840-842.
CU	KAUFMAN, R.J. Translational efficiency of polycistronic mRNAs and their utilization to express heterologous genes in mammalian cells. EMBO J. 6, 1987, 187-195.
CV	BELEV, T.N. et al. A fully modular vector system for the optimization of gene expression in <i>Escherichia coli</i> . Plasmid 26, 1991, 147-150.
CW	KAUFFMANN, I.M. Erhoehung der Mikrobieller und Molekularen Diversitat von Carotinoiden. Institute of Technical Biology, Stuttgart University, June 2002.
CX	RUTHER, A. et al. Production of zeaxanthin in <i>Escherichia coli</i> transformed with different carotenogenic plasmids. Appl Microbiol Biotechnol 48, 1997, 162-167.
CY	SANDMANN, G. Genetic manipulation of carotenoid biosynthesis: strategies, problems and achievements. TRENDS in Plant Science, 6(1), 2001, 14-17.
CZ	SANDMANN, G. et al. The biotechnological potential and design of novel carotenoids by gene combination in <i>Escherichia coli</i> . TIBTECH, 17, 1999, 233-237.

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹Applicant's unique citation designation number (optional). ²Applicant is to place a check mark here if English language Translation is attached.

447770_1.DOC

Examiner Signature		Date Considered	
-----------------------	--	--------------------	--